## Bureau of Land Management



## Amarillo Field Office Helium Operations

Statistical Report for December - 1999





Distribution:

Fluid Minerals Group Manager, Washington Office

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- -Federal Leased Lands
- -Gas Analysis
- -Resources Evaluation
- -Natural Gas Engineering

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Amarillo, Texas

Issued: September 27, 2000

\* Revised \*

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Approved for distribution: Nelson R. Bullard /s/
Date: 09/27/2000

## **Table 1 - Summary of Helium Operations**

## December - 1999

| In Kind Sales      | NASA*   | Navy* | Army* | Air Force* | DOE*   | Other Fed* | Subtotal* | In Kind | Charges Billed (\$)** |              |
|--------------------|---------|-------|-------|------------|--------|------------|-----------|---------|-----------------------|--------------|
| Total month        | 32,654  | 460   | 0     | 10,639     | 11,166 | 3,834      | 58,753    | 57,844  |                       | \$2,834,356  |
| Total FYTD         | 32,654  | 460   | 0     | 10,639     | 11,166 | 3,834      | 58,753    | 57,844  |                       | \$2,834,356  |
| Total CYTD         | 131,829 | 2,922 | 0     | 40,293     | 39,344 | 13,540     | 227,928   | 224,399 |                       | \$10,986,867 |
| In Kind Transfers  |         |       |       |            |        |            | Month     | FYTD    | CYTD                  | Cumulative   |
| Transferred        |         |       |       |            |        |            | 334       | 56,930  | 217,685               | 302,518      |
| Volume outstanding |         |       |       |            |        |            | 57,844    |         |                       |              |

|   |             | Month   |           | Month                      | FYTD   | Month | FYTD    | FYTD                | CYTD        | Cumulative  |
|---|-------------|---------|-----------|----------------------------|--------|-------|---------|---------------------|-------------|-------------|
|   | Helium-Gas  | Helium  |           | Low Purity<br>elium Helium |        | Belo  | w 50%   | Contained<br>Helium |             |             |
| Purchased Helium                        | Mixture     | Percent | Helium    |                            |        | He    | lium    |                     |             |             |
| Total purchased                         |             |         |           |                            |        |       |         |                     |             | 32,176,145  |
| Purchased helium produced / transferred |             |         | 334       |                            |        |       |         | 56,930              | 217,685     | 2,287,858   |
| Balance of purchased helium in storage  |             |         |           |                            |        |       |         |                     |             | 29,888,287  |
| Private Plant Activity                  |             |         |           |                            |        |       |         |                     |             |             |
| Accepted in storage system              | 115,751     | 70.15%  | 81,201    | 1,615                      | 10,506 | (223) | (1,192) | 236,386             | 1,135,278   | 5,248,541   |
| Redelivered from storage system         | n (132,021) | 69.97%  | (92,376)  | 0                          | 0      | 12    | 1,564   | (328,189)           | (1,247,387) | (4,078,393) |
| Total apparent crude produced/          | 275,213     | 72.34%  | 199,102   |                            |        |       |         | 580,853             | 2,297,815   | NA          |
| Total apparent crude refined^           | (237,307)   | 71.96%  | (170,775) |                            |        |       |         | (558,242)           | (1,978,243) | NA          |

|                                  |                                 |          | Metered Ga    | is        |            | Transfe | s Billed   |           |           |           |  |
|----------------------------------|---------------------------------|----------|---------------|-----------|------------|---------|------------|-----------|-----------|-----------|--|
|                                  | Gross Gas                       | Helium   | Helium Helium |           |            | Helium  |            | Helium    | Dollars** |           |  |
| <b>Storage Contract Activity</b> | Storage Contract Activity Month |          | FYTD          | CYTD      | Cumulative | Month   | Cumulative | EOM       | Month     | FYTD      |  |
| Crude Acquired                   | 115,289                         | 80,978   | 235,194       | 1,131,289 | 22,629,379 | 61,890  | 22,280,366 |           |           |           |  |
| Crude Disposed                   | 131,982                         | 92,364   | 326,625       | 1,244,676 | 15,904,683 | 61,556  | 21,977,579 |           |           |           |  |
| Grade-A Rdlvrd                   | 0                               | 0        | 0             | 0         | 1,427,554  | 0       | 0          |           |           |           |  |
| Net/Balance                      | (16,693)                        | (11,386) | (91,431)      | (113,387) | 5,297,142  | 334     | 302,787    | 4,906,083 | \$5,969   | \$365,416 |  |

| <b>Bush Dome Reservoir Operations</b>  | Month                 |            | Fiscal Year |            | Since St<br>Conservation |            | Since<br>Field Discovery |            |
|--|-----------------------|------------|-------------|------------|--------------------------|------------|--------------------------|------------|
| Conservation gases from all sources    | Gross                 | Net        | Gross       | Net        | Gross                    | Net        | Gross                    | Net        |
| In underground storage, beg. of period | 48,152,013            | 34,750,333 | 48,270,503  | 34,836,504 | 490,620                  | 490,620    | 0                        |            |
| Net Activity                           | (14,975)              | (10,866)   | (133,465)   | (97,037)   | 47,646,418               | 34,248,847 | 48,137,038               | 34,739,467 |
| Total in underground storage           | 48,137,038 34,739,467 |            | 48,137,038  | 34,739,467 | 48,137,038               | 34,739,467 | 48,137,038               | 34,739,467 |
| Native Gas                             |                       |            |             |            |                          |            |                          |            |
| Total in place, beg. of period         | 209,033,043           |            | 209,039,114 |            | 265,724,755              |            | 318,727,000              |            |
| Net Activity                           | (1,844)               |            |             |            |                          |            |                          |            |
| Total in place, end of month           | 209,031,199           |            |             |            |                          |            |                          |            |
| Native Gas plus Conservation Gases     |                       |            |             |            |                          |            |                          |            |
| Total gases in place, beg. of period   | 257,185,056           |            | 257,309,617 |            | 266,215,375              |            | 318,727,000              |            |
| Net Activity                           | (16,819)              |            | (141,380)   |            | (9,047,138)              |            | (61,558,763)             |            |
| Total gases in place, end of month     | 257,168,237           |            | 257,168,237 |            | 257,168,237              |            | 257,168,237              |            |

| Helium Resources Evaluation                | Month     |    | FYTD      |   |           |     |
|--|-----------|----|-----------|---|-----------|-----|
| Revenue Collected from Federal Lease Holds |           |    | \$315,010 |   | \$943,671 |     |
| Helium Sample Collection Report            | Submitted | 12 | Received  | 5 | Analyzed  | 122 |
| Contains Comment Cond. Welled              |           |    | 35.3      | _ |           |     |
| Customer Comment Cards Mailed              |           |    | Month     | 0 | FYTD      | 17  |

Table 5 - Pipeline & Cliffside Field Operations All Volumes in Mcf at 14.65 psia & 60°F

December - 1999

|   | 1           | 2          | 3           | 4          | 5           | 6          | 7               | 8          |
|---|-------------|------------|-------------|------------|-------------|------------|-----------------|------------|
|   |             |            |             |            | Since S     | tart of    | Since           |            |
|   | Mor         | nth        | Fiscal      | Year       | Conservatio | n Program  | Field Discovery |            |
|   | Gross       | Net        | Gross       | Net        | Gross       | Net        | Gross           | Net        |
| Conservation Pipeline                   |             |            |             |            |             |            |                 |            |
| Beginning of period inventory (1)       | 19,149      | 13,405     | 18,919      | 13,243     | 0           | 0          |                 |            |
| Measured to pipeline (2)                | 131,207     | 92,076     | 478,199     | 333,536    | 99,985,505  | 71,640,893 |                 |            |
| Measured from pipeline (3)              | 132,021     | 92,377     | 474,536     | 328,192    | 34,246,798  | 24,661,030 |                 |            |
| Measured into Bush Dome (4)             | 0           | О          | 0           | 0          | 64,351,432  | 46,233,500 |                 |            |
| Calculated inventory (1+2-3-4)          | 18,335      | 13,104     | 22,582      | 18,587     | 1,387,275   | 746,363    |                 |            |
| End of period inventory                 | 19,980      | 13,986     | 19,980      | 13,986     | 19,980      | 13,986     |                 |            |
| Line gain or (loss)                     | 1,644       | 882        | (2,602)     | (4,601)    | (1,367,295) | (732,377)  |                 |            |
| Percent gain (loss) of total measured   | 0.625%      | 0.478%     | -0.273%     | -0.695%    | -0.689%     | -0.514%    |                 |            |
| <b>Bush Dome Reservoir Operation</b>    | ons         |            |             |            |             |            |                 |            |
| Conservation gases from all sources     |             |            |             |            |             |            |                 |            |
| In underground storage, beg. of period  | 48,152,013  | 34,750,333 | 48,270,503  | 34,836,504 | 490,620     | 490,620    | 0               | 0          |
| Injected during period to date          | 0           | 0          | 0           | 0          | 64,351,703  | 46,233,461 | 64,959,603      | 46,841,361 |
| Withdrawn during period to date         | 14,975      | 10,866     | 133,465     | 97,037     | 16,751,434  | 12,030,763 | 16,868,714      | 12,148,043 |
| Helium from Exell-Soncy                 | 0           | О          | 0           | 0          | 46,149      | 46,149     | 46,149          | 46,149     |
| Total in underground storage            | 48,137,038  | 34,739,467 | 48,137,038  | 34,739,467 | 48,137,038  | 34,739,467 | 48,137,038      | 34,739,467 |
| Native Gas                              |             |            |             |            |             |            |                 |            |
| Total in place, beg. of period          | 209,033,043 |            | 209,039,114 |            | 265,724,755 |            | 318,727,000     |            |
| Recoverable in place, beg. of period    | 199,982,043 |            | 199,988,114 |            | 256,673,755 |            | 309,676,000     |            |
| Production during period to date        | 1,844       |            | 7,915       |            | 56,693,556  |            | 109,695,801     |            |
| Total in place, end of month            | 209,031,199 |            | 209,031,199 |            | 209,031,199 |            | 209,031,199     |            |
| Recoverable in place, end of month      | 199,980,199 |            | 199,980,199 |            | 199,980,199 |            | 199,980,199     |            |
| Native Gas plus Conservation Gases      |             |            |             |            |             |            |                 |            |
| Total gases in place, beg. of period    | 257,185,056 |            | 257,309,617 |            | 266,215,375 |            | 318,727,000     |            |
| Total gases in place, end of month      | 257,168,237 |            | 257,168,237 |            | 257,168,237 |            | 257,168,237     |            |
| Change during period                    | (16,819)    |            | (141,380)   |            | (9,047,138) |            | (61,558,763)    |            |
| And was a single-second base of second  | 075.4       | Γ          | 075.0       |            | 205.0       | ſ          |                 |            |
| Ave. reservoir pressure, beg. of period | 675.4       | L          | 675.8       |            | 685.0       | l          | 814.1           |            |
| <b>Tuck Trigg Reservoir Operation</b>   | ons         |            |             |            |             |            |                 |            |
| Native Gas                              |             |            |             |            |             |            |                 |            |
| Total in place, beg. of period          | 5,233,809   |            | 5,233,991   |            |             |            | 5,890,000       |            |
| Recoverable in place, beg. of period    | 4,563,809   |            | 4,563,991   |            |             |            | 5,220,000       |            |
| Production during period to date        | 936         |            | 1,118       |            |             |            | 657,127         |            |
| Total in place, end of month            | 5,232,873   |            | 5,232,873   |            |             |            | 5,232,873       |            |
| Recoverable in place, end of month      | 4,562,873   |            | 4,562,873   |            |             |            | 4,562,873       |            |
| Ave. reservoir pressure, beg. of period | 486.9       | [          | 487.0       |            |             | [          | 548.0           |            |
|   |             | L          |             |            |             | L          |                 |            |